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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/072,622

DATE: 02/27/2002

TIME: 13:50:08

Input Set : A:\07039-331001.TXT

Output Set: N:\CRF3\02272002\J072622.raw

4 <110> APPLICANT: Chen, Lieping
5 Bajorath, Jorgen
7 <120> TITLE OF INVENTION: ICOS Mutants
10 <130> FILE REFERENCE: 07039-331001
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/072,622
C--> 12 <141> CURRENT FILING DATE: 2002-02-07
12 <160> NUMBER OF SEQ ID NOS: 42
14 <170> SOFTWARE: FastSEQ for Windows Version 4.0
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 96
18 <212> TYPE: PRT
19 <213> ORGANISM: Mus musculus
21 <400> SEQUENCE: 1
22 Val Thr Gln Pro Ser Val Leu Ala Ser Ser His Gly Val Ala Ser Phe
23 1 5 10 15
24 Pro Cys Glu Ser Pro Ser His Asn Thr Asp Val Val Thr Val Leu Gln
25 20 25 30
26 Thr Asn Asp Gln Met Thr Val Ala Thr Thr Phe Thr Glu Lys Asn Thr
27 35 40 45
28 Val Gly Phe Leu Asp Tyr Pro Phe Ser Gly Thr Phe Asn Glu Ser Arg
29 50 55 60
30 Val Asn Leu Thr Ile Gln Gly Leu Arg Ala Val Asp Gly Leu Tyr Leu
31 65 70 75 80
32 Cys Val Leu Phe Val Gly Met Gly Gln Ile Tyr Val Ile Pro Glu Pro
33 85 90 95
35 <210> SEQ ID NO: 2
36 <211> LENGTH: 96
37 <212> TYPE: PRT
38 <213> ORGANISM: Rattus norvegicus
40 <400> SEQUENCE: 2
41 Val Thr Gln Pro Ser Val Leu Ala Ser Ser His Gly Val Ala Ser Phe
42 1 5 10 15
43 Pro Cys Glu Ala Ser Ser His Asn Thr Asp Val Val Thr Val Leu Gln
44 20 25 30
45 Thr Asn Asp Gln Val Thr Val Ala Thr Thr Phe Thr Val Lys Asn Thr
46 35 40 45
47 Leu Gly Phe Leu Asp Asp Pro Phe Ser Gly Thr Phe Asn Glu Ser Arg
48 50 55 60
49 Val Asn Leu Thr Ile Gln Gly Leu Arg Ala Ala Asp Gly Leu Tyr Phe
50 65 70 75 80
51 Cys Val Leu Phe Val Gly Met Gly Gln Ile Tyr Val Ile Pro Glu Pro
52 85 90 95
54 <210> SEQ ID NO: 3

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55 <211> LENGTH: 96

56 <212> TYPE: PRT

57 <213> ORGANISM: Homo sapiens

59 <400> SEQUENCE: 3

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60 Val Ala Gln Pro Ala Val Leu Ala Ser Ser Arg Gly Ile Ala Ser Phe
61 1          5          10          15
62 Val Cys Glu Ala Ser Pro Gly Lys Ala Thr Val Val Thr Val Leu Gln
63          20          25          30
64 Ala Asp Ser Gln Val Thr Val Ala Ala Thr Tyr Met Met Gly Asn Glu
65          35          40          45
66 Leu Thr Phe Leu Asp Asp Ser Ile Thr Gly Thr Ser Ser Gly Asn Gln
67          50          55          60
68 Val Asn Leu Thr Ile Gln Gly Leu Arg Ala Met Asp Gly Leu Tyr Ile
69 65          70          75          80
70 Cys Val Leu Tyr Leu Gly Ile Gly Gln Ile Tyr Val Ile Pro Glu Pro
71          85          90          95

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73 <210> SEQ ID NO: 4

74 <211> LENGTH: 96

75 <212> TYPE: PRT

76 <213> ORGANISM: Bos taurus

78 <400> SEQUENCE: 4

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79 Val Ser Gln Pro Ala Val Leu Ala Ser Ser Arg Gly Val Ala Ser Phe
80 1          5          10          15
81 Val Cys Glu Ala Ser Ser His Lys Ala Thr Val Val Thr Val Leu Gln
82          20          25          30
83 Ala Asn Ser Gln Met Thr Val Ala Met Thr Tyr Thr Val Glu Asn Glu
84          35          40          45
85 Leu Thr Phe Ile Asp Asp Ser Thr Thr Gly Ile Ser His Gly Asn Lys
86          50          55          60
87 Val Asn Leu Thr Ile Gln Gly Leu Ser Ala Met Asp Gly Leu Tyr Ile
88 65          70          75          80
89 Cys Val Leu Tyr Val Gly Met Gly Gln Ile Tyr Val Ile Pro Glu Pro
90          85          90          95

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92 <210> SEQ ID NO: 5

93 <211> LENGTH: 95

94 <212> TYPE: PRT

95 <213> ORGANISM: Mus musculus

97 <400> SEQUENCE: 5

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98 Val Gln Pro Leu Val Asp Ser Glu Ser Leu Cys Leu Ala Ala Leu Tyr
99 1          5          10          15
100 Gly Val Asn Asp Val Gly Asn Gly Asn Phe Thr Tyr Gln Pro Gln Phe
101          20          25          30
102 Arg Ser Asn Ala Glu Phe Asn Cys Asp Gly Asp Phe Asp Asn Glu Thr
103          35          40          45
104 Val Thr Phe Arg Leu Trp Asn Leu His Val Asn His Thr Asp Ile Tyr
105          50          55          60
106 Phe Cys Lys Ile Glu Phe Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu
107 65          70          75          80
108 Arg Ser Asn Gly Thr Ile Ile His Ile Lys Glu Lys His Leu Cys

```

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109                               85                               90                               95
111 <210> SEQ ID NO: 6
112 <211> LENGTH: 95
113 <212> TYPE: PRT
114 <213> ORGANISM: Rattus norvegicus
116 <400> SEQUENCE: 6
117 Val Gln Pro Leu Val Asp Asn Glu Ser Leu Cys Leu Ala Ala Leu Tyr
118 1 5 10 15
119 Gly Val Asn Asp Val Gly Asn Gly Asn Phe Thr Tyr Gln Pro Gln Phe
120 20 25 30
121 Arg Pro Asn Val Gly Phe Asn Cys Asp Gly Asn Phe Asp Asn Glu Thr
122 35 40 45
123 Val Thr Phe Arg Leu Trp Asn Leu Asp Val Asn His Thr Asp Ile Tyr
124 50 55 60
125 Phe Cys Lys Ile Glu Val Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu
126 65 70 75 80
127 Lys Ser Asn Gly Thr Ile Ile His Ile Lys Glu Lys His Leu Cys
128 85 90 95
130 <210> SEQ ID NO: 7
131 <211> LENGTH: 95
132 <212> TYPE: PRT
133 <213> ORGANISM: Bos taurus
135 <400> SEQUENCE: 7
136 Val Gln Pro Met Val Asn Asn Glu Asn Leu Cys Phe Ser Ala Leu Tyr
137 1 5 10 15
138 Gly Ala Asp Ala Val Val Asn Gly Asn Phe Ser His Pro His Gln Phe
139 20 25 30
140 His Ser Thr Thr Gly Phe Asn Cys Asp Gly Lys Leu Gly Asn Glu Thr
141 35 40 45
142 Val Thr Phe Tyr Leu Lys Asn Leu Tyr Val Asn Gln Thr Asp Ile Tyr
143 50 55 60
144 Phe Cys Lys Ile Glu Val Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu
145 65 70 75 80
146 Lys Ser Asn Gly Thr Ile Ile His Val Lys Glu Gln His Phe Cys
147 85 90 95
149 <210> SEQ ID NO: 8
150 <211> LENGTH: 95
151 <212> TYPE: PRT
152 <213> ORGANISM: Homo sapiens
154 <400> SEQUENCE: 8
155 Val Gln Pro Met Ala Tyr Asp Ala Asn Leu Cys Phe Ser Ala Leu His
156 1 5 10 15
157 Gly Leu Asp Ala Val Val Tyr Gly Asn Tyr Ser Gln Gln Leu Gln Val
158 20 25 30
159 Tyr Ser Lys Thr Gly Phe Asn Cys Asp Gly Lys Leu Gly Asn Glu Ser
160 35 40 45
161 Val Thr Phe Tyr Leu Gln Asn Leu Tyr Val Asn Gln Thr Asp Ile Tyr
162 50 55 60
163 Phe Cys Lys Ile Glu Val Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu

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164 65          70          75          80
165 Lys Ser Asn Gly Thr Ile Ile His Val Lys Glu Lys His Leu Cys
166          85          90          95
168 <210> SEQ ID NO: 9
169 <211> LENGTH: 112
170 <212> TYPE: PRT
171 <213> ORGANISM: Mus musculus
173 <400> SEQUENCE: 9
174 Ala Asp His Arg Met Phe Ser Phe His Asn Gly Gly Val Gln Ile Ser
175 1          5          10          15
176 Cys Lys Tyr Pro Asp Ile Val Gln Gln Leu Lys Met Arg Leu Phe Arg
177          20          25          30
178 Glu Arg Glu Val Leu Cys Glu Leu Thr Lys Thr Lys Gly Ser Gly Asn
179          35          40          45
180 Ala Val Ser Ile Lys Asn Pro Met Leu Cys Leu Tyr His Leu Ser Asn
181          50          55          60
182 Asn Ser Val Ser Phe Phe Leu Asn Asn Pro Asp Ser Ser Gln Gly Ser
183 65          70          75          80
184 Tyr Tyr Phe Cys Ser Leu Ser Ile Phe Asp Pro Pro Pro Phe Gln Glu
185          85          90          95
186 Arg Asn Leu Ser Gly Gly Tyr Leu His Ile Tyr Glu Ser Gln Leu Cys
187          100          105          110
189 <210> SEQ ID NO: 10
190 <211> LENGTH: 111
191 <212> TYPE: PRT
192 <213> ORGANISM: Homo sapiens
194 <400> SEQUENCE: 10
195 Ala Asn Tyr Glu Met Phe Ile Phe His Asn Gly Gly Val Gln Ile Leu
196 1          5          10          15
197 Cys Lys Tyr Pro Asp Ile Val Gln Gln Phe Lys Met Gln Leu Leu Lys
198          20          25          30
199 Gly Gly Gln Ile Leu Cys Asp Leu Thr Lys Thr Lys Gly Ser Gly Asn
200          35          40          45
201 Thr Val Ser Ile Lys Ser Leu Lys Phe Cys His Ser Gln Leu Ser Asn
202          50          55          60
203 Asn Ser Val Ser Phe Phe Leu Tyr Asn Leu Asp His Ser His Ala Asn
204 65          70          75          80
205 Tyr Tyr Phe Cys Asn Leu Ser Ile Phe Asp Pro Pro Pro Phe Lys Val
206          85          90          95
207 Thr Leu Thr Gly Gly Tyr Leu His Ile Tyr Glu Ser Gln Leu Cys
208          100          105          110
210 <210> SEQ ID NO: 11
211 <211> LENGTH: 6
212 <212> TYPE: PRT
213 <213> ORGANISM: Homo sapiens
215 <400> SEQUENCE: 11
216 Met Tyr Pro Pro Pro Tyr
217 1          5
219 <210> SEQ ID NO: 12

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Input Set : A:\07039-331001.TXT

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220 <211> LENGTH: 199

221 <212> TYPE: PRT

222 <213> ORGANISM: Homo sapiens

224 <400> SEQUENCE: 12

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225 Met Lys Ser Gly Leu Trp Tyr Phe Phe Leu Phe Cys Leu Arg Ile Lys
226 1 5 10 15
227 Val Leu Thr Gly Glu Ile Asn Gly Ser Ala Asn Tyr Glu Met Phe Ile
228 20 25 30
229 Phe His Asn Gly Gly Val Gln Ile Leu Cys Lys Tyr Pro Asp Ile Val
230 35 40 45
231 Gln Gln Phe Lys Met Gln Leu Leu Lys Gly Gly Gln Ile Leu Cys Asp
232 50 55 60
233 Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Ser Leu
234 65 70 75 80
235 Lys Phe Cys His Ser Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
236 85 90 95
237 Tyr Asn Leu Asp His Ser His Ala Asn Tyr Tyr Phe Cys Asn Leu Ser
238 100 105 110
239 Ile Phe Asp Pro Pro Pro Phe Lys Val Thr Leu Thr Gly Gly Tyr Leu
240 115 120 125
241 His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Phe Trp Leu Pro
242 130 135 140
243 Ile Gly Cys Ala Ala Phe Val Val Val Cys Ile Leu Gly Cys Ile Leu
244 145 150 155 160
245 Ile Cys Trp Leu Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro
246 165 170 175
247 Asn Gly Glu Tyr Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser
248 180 185 190
249 Arg Leu Thr Asp Val Thr Leu
250 195

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252 <210> SEQ ID NO: 13

253 <211> LENGTH: 62

254 <212> TYPE: DNA

255 <213> ORGANISM: Artificial Sequence

257 <220> FEATURE:

258 <223> OTHER INFORMATION: Primer

260 <400> SEQUENCE: 13

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261 ttatgcaa atcctgacat tgtcagggag ttccggatgc agttgctgaa aggggggcaa 60
262 at 62

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264 <210> SEQ ID NO: 14

265 <211> LENGTH: 22

266 <212> TYPE: DNA

267 <213> ORGANISM: Artificial Sequence

269 <220> FEATURE:

270 <223> OTHER INFORMATION: Primer

272 <400> SEQUENCE: 14

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273 gacaatgtca ggatatttgc at 22

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275 <210> SEQ ID NO: 15

276 <211> LENGTH: 59

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/072,622

DATE: 02/27/2002

TIME: 13:50:09

Input Set : A:\07039-331001.TXT

Output Set: N:\CRF3\02272002\J072622.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date